

## Historic Social Assessment

People have been, and will continue to be, an integral part of the Bighorn Mountain area. The objective of this profile is to explore the linkages, interactions, and influences people and their activities have had, and might be expected to have, on the natural resources in this landscape in order to set a context for interpreting ecological condition. The social unit of analysis for this profile will be the four Bighorn National Forest counties: Big Horn, Johnson, Sheridan, and Washakie.

A map of the counties and major cities in relation to the Bighorn Mountains is on the following page.

### PHYSICAL ENVIRONMENT CONDITIONS AND TRENDS

The Bighorn Mountains are basically surrounded by the Big Horn and Powder River Basins. The Big Horn basin is semi-arid, with annual rainfall of 6 to 10 inches, while the annual precipitation in the Powder River basin is on the order of 14 inches. The vegetation of the Big Horn basin is characterized as desert shrub, along with sagebrush (Knight, 1994). The western portion of the Powder River basin has grassland vegetation typical of the northern great plains (Knight, 1994).

Crop agriculture in the Big Horn Basin depends upon irrigation water drawn from the Big Horn River. The Big Horn Basin has the greatest number of frost-free days in the state of Wyoming, which is reflected in the relatively large number of crops grown. There is little crop agriculture east of the Big Horns in the Powder River Basin.

The primary agricultural use of the land in the basins is livestock grazing, which directly influences the Bighorn Mountains, as many ranchers depend upon the mountain rangelands for their summer pasture. Most of the communities in this analysis area were established as ranching communities, and that tradition and character is very much alive today. As we will examine in the economics section, the communities' identity as western, ranching towns, and the value that local people place on ranch open-space, is disproportionate to the relative economic impact of livestock grazing.

The larger communities in the analysis area are located on or near some natural feature. The Big Horn basin communities of Lovell, Greybull and Worland are situated on the Big Horn River. Sheridan and Buffalo sit at the eastern foot of the Big Horn mountains.

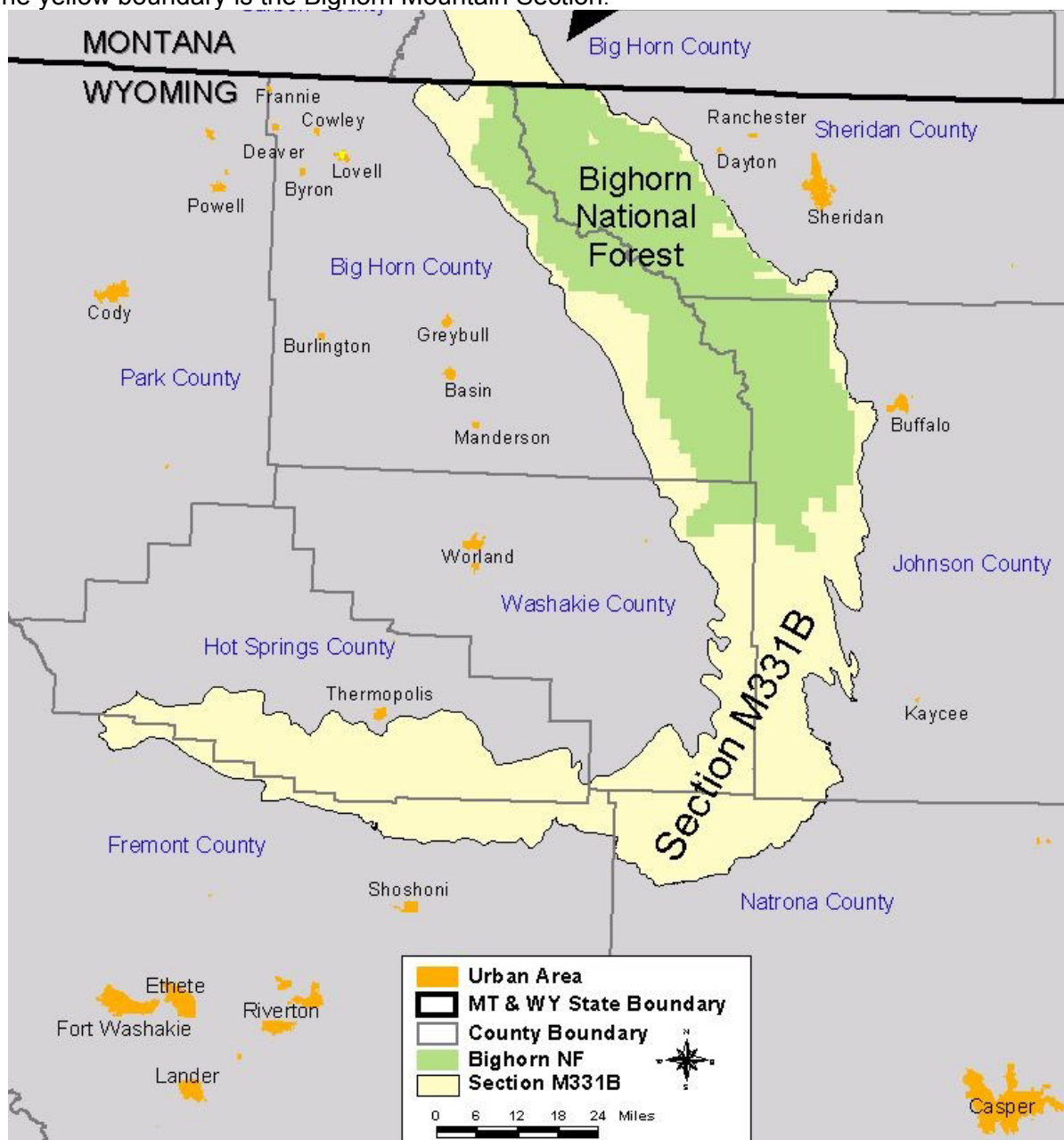
### HISTORICAL INFLUENCES

In his book *The Natural West*, Dan Flores describes the interaction between people and their local environment:

*"...successive cultures inhabiting a space interact with a "nature" more or less altered by the previous inhabitants. And we ought to understand that the structure of the dialogue – and that is the proper way to describe it – between local ecologies and human culture is the same kind of dialogue that exists between habitat and species in natural selection."*

**Map 1: Map of Counties and Major Cities Near the Bighorn Mountains**

The yellow boundary is the Bighorn Mountain Section.



People have lived in the area for about as long as people have lived in North America, as evidenced by the Colby site south of Worland, where Dr. George Frison of the University of Wyoming found a Clovis point that indicates human habitation dating back about 10,000 years.

More recently several Native American tribes, including the Crow, Shoshone, Snakes lived in the Powder River and Bighorn Basins in the 1700's. By 1812, the Crow were the dominant culture using the area (Murray, 1980). Within a few decades, the Powder River Basin had become part of the country dominated by the Sioux and Northern Cheyenne.

1802 brought the first European men of specific record to within close-up view of the Bighorn

Mountains, and the first recorded crossing of the Bighorns came a decade later, when a party with the American Fur Company crossed over near Powder River Pass. While the fur trappers spent time traveling through the Bighorn Mountain country, "...there is not much indication of the kind of intensive trapping activity we find in some other mountain regions." (Murray, 1980)

Likewise, mining in the Bighorn Mountains itself was never an important activity. In his review of the Bighorn Mountains, N.H. Darton concluded that the mineral prospects proved disappointing, and there was little chance that the area would become important on account of its mineral resources. (Darton, 1906) The most significant area of mining was in the Bald Mountain vicinity, where about 2 years of gold-mining took place in the early 1890s.

There are several major "recent" historical influences that have had effects upon the resources of the Bighorn Mountains to this day.

While many areas of the west were settled by Europeans as early as the 1840's and 1850's, with associated human impacts upon the nearby resources, the Bighorn mountain area remained largely the domain of native Americans until after the Battle of Little Bighorn in 1876. Earlier attempted "civilization" of the eastern side of the Bighorn mountains was successfully resisted by the Sioux and Northern Cheyenne people in 1867 when they forced the US Army to abandon Fort Phil Kearney. The city of Sheridan, for example, was organized in 1882, and most of the Bighorn Basin communities were not organized until about 1900. Therefore, the impact of European man on the resources of the Bighorn Mountains was rather minimal until about 1880.

Numerous reservoirs were constructed in the Big Horns in the 1890s, and some of the communities, including Buffalo and Sheridan, get drinking water from streams originating in the Big Horns.

Minor logging operations for fuelwood and building materials had minor impacts along the fringes of the Big Horn mountains. Logging for railroad ties was important in the Tongue and Clear Creek watersheds. The South Tongue River area was heavily tie-hacked between about 1893 and 1908. While there was some stream alteration for tie drives in portions of the Tongue River, a large tie-flume network was developed. Tie-hacking in the Clear Creek watershed above Buffalo did not begin until 1924, and lasted about a decade. Annual reports in the local papers listed tens of thousands of dollars of "stream improvements", which were channel straightening and debris removal, activities which have been documented to have long-lasting effects (Young, et al, 1994). One other lasting effect of the early tie-hacking was that tie hacking was largely a "high-grade" operation that left the "lame, sick, and lazy", which is posited to have lasting genetic effects (Howe, 1996).

The European economic activity that most influenced on the resources and the settlement patterns in the Big Horn mountain area was livestock grazing. The first permanent settlers were associated with ranching activities. While the record is not totally clear on when livestock were first grazed in the mountains (Murray, 1980), it is clear that by the time of the establishment of the Bighorn Reserve in 1897 the number of livestock utilizing the summer range of the mountain was very large (Jack, 1900). Ecologically, this level of grazing had important impacts upon the resource, at least some of which have recovered under improved grazing practices since, see pictures 1 and 2 below.

**Picture 1. “Ground worn down and trampled hard and willows killed by sheep. Near crossing of the North Fork of Crazy Woman Creek, 9/7/1900”**



**Picture 2. Same spot as picture 1. Taken around 1975.**



The grazing legacy of the settlement period has had several lasting effects.

Despite decreases in the numbers of permitted livestock, the Bighorn National Forest remains a relatively heavily stocked National Forest.

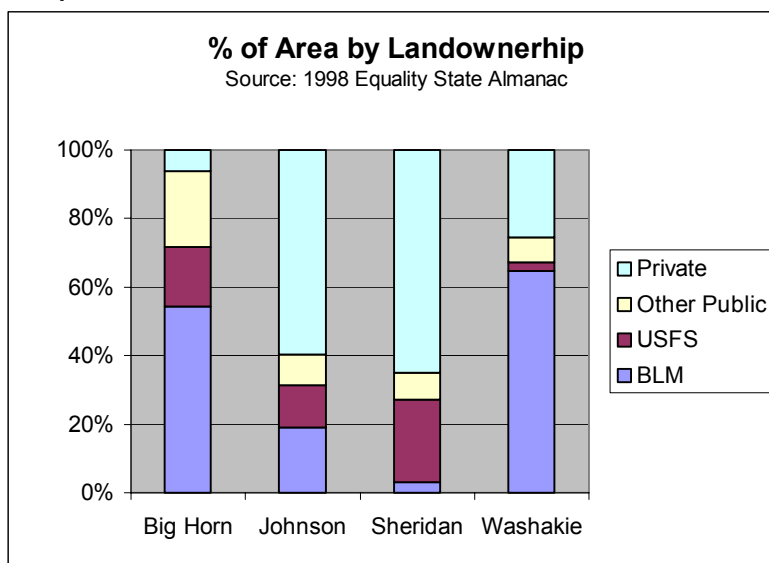
The communities around the Bighorn Mountains have a “cowboy, western” identity, that is used for economic purposes, such as tourism promotion, and helps to define the sense of place people living in the area have.



## LAND OWNERSHIP PATTERNS

Figure 1 shows the percentage of each county by landownership. Nearly 94% of Big Horn County and 75% of Washakie County is in public ownership. Private land influences, such as agriculture or subdivision development, have had, and will continue to have, a relatively small impact upon the landscape in those counties. On the other end are Sheridan and Johnson Counties, with 35% and 40%, respectively, in public ownership. The landscapes in these counties have the potential to be changed through private land management decisions.

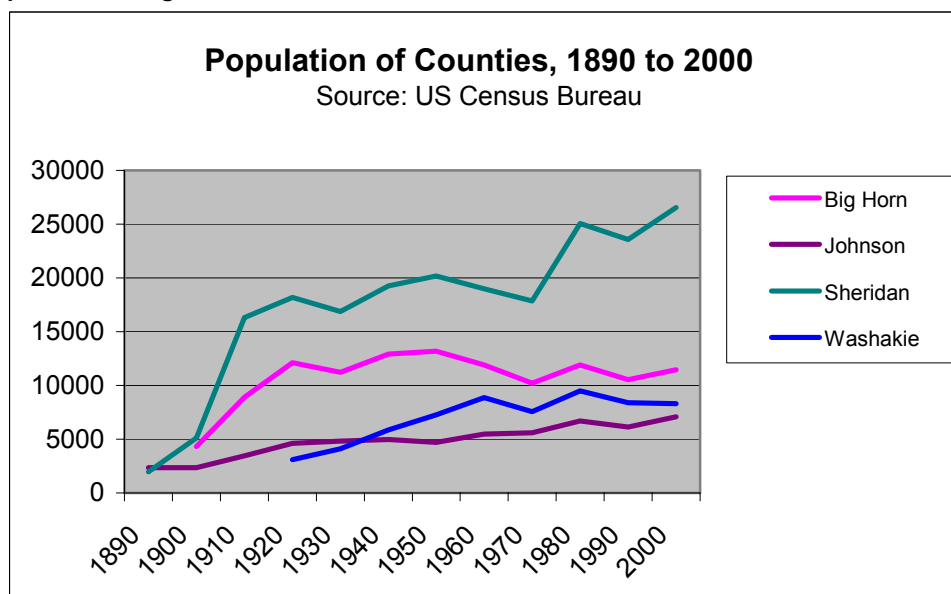
Figure 1. Land Ownership Pattern



## DEMOGRAPHIC TRENDS

Figure 2 shows the county populations from 1890 to 2000. In contrast with most national trends, Big Horn and Washakie counties have had population declines over different periods, as shown in figure 3.

Figure 2. Population of Bighorn National Forest Counties



**Table 3. Counties experiencing a long-term decline in population**

County	Year	Population	Percent Decline
Big Horn	1920	12,105	5%
	2000	11,461	
Washakie	1960	8,883	7%
	2000	8,289	

Charts 3 and 4 show how residential density is projected to change between 1960 and 2050. The areas around Sheridan, Buffalo, and Greybull are expected to have noticeable residential density increases.

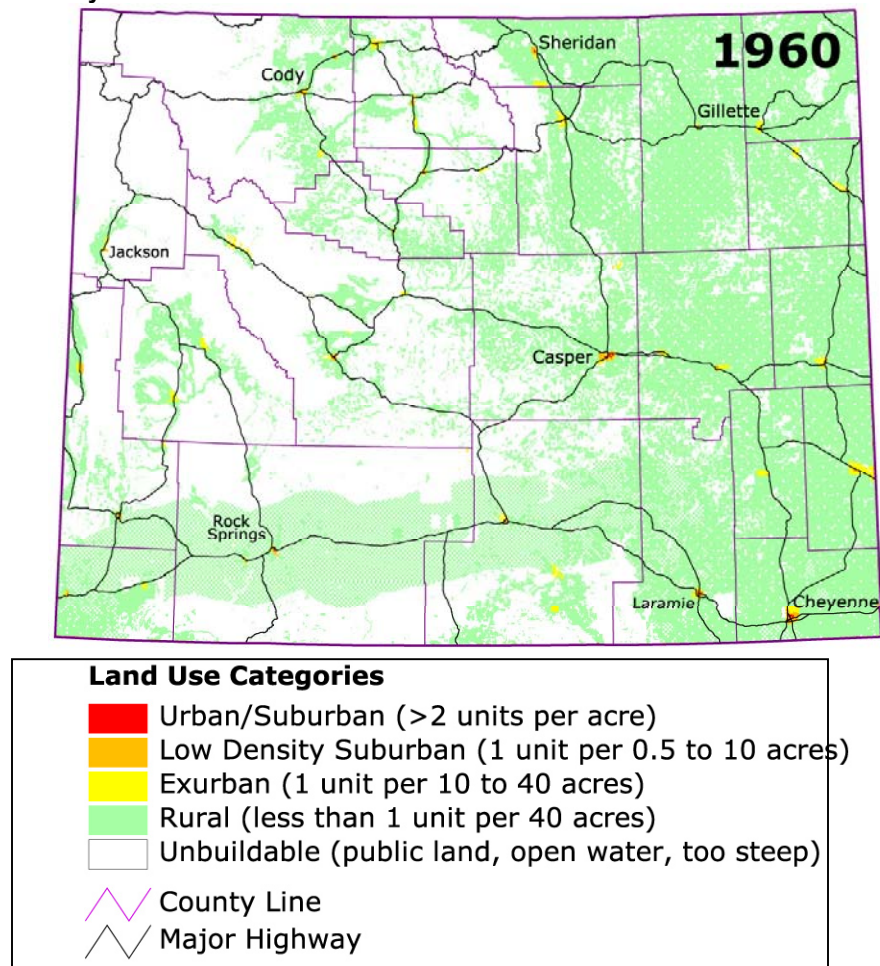
This information was compiled by the University of Colorado's Center for the American West. These projections are calculated from U.S. Census figures for population and housing data based on a model developed by David Theobald, a researcher in the Natural Resource Ecology Laboratory at Colorado State University.

According to the researchers at the Center, sprawl increases because the percentage of people choosing to live in low-density areas is increasing faster than the overall population. Theobald calculated the amount of land available for development, the number of housing units needed to meet the projected population, and locations where units are likely to be placed first – usually adjacent to existing growth areas not impeded by steep slopes, public lands or other development limitations. "Population estimates for 2050 were created by simply assuming that the same finite increase in population during 2000-2025 would occur again from 2025 to 2050 – this implies a slowing rate of growth that we think makes it a conservative projection," according to Theobald.

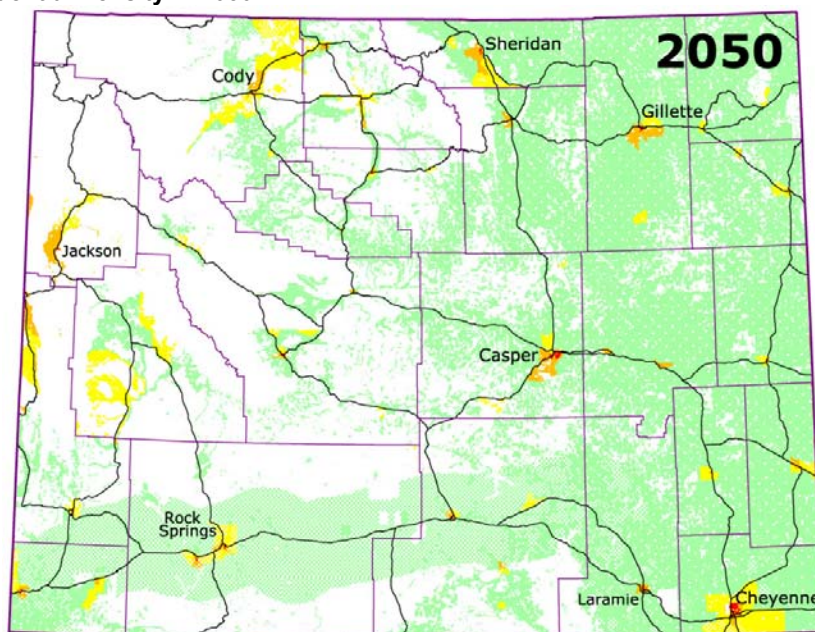
Perhaps the most significant impact of sprawl from an ecosystem perspective is the amount of habitat and open space being turned into an urban setting. One example of a habitat impact is that the elk populations summer on the Bighorn National Forest, and spend their winters in the adjacent basins. Increasing urban sprawl will decrease the amount of available habitat and forage; western Wyoming elk herds are already fed in approximately 10 locations due to fact that "hunting season demand" for this species exceeds the winter range capacity. This conflict between human and wildlife "habitats" is felt by other species, such as black bear and mountain lion. Another impact from the increase in the amount of urban sprawl is the decrease in the amount of open space and low populations that current residents prize as a quality of life indicator.

Figure 3 shows the median age by county for the analysis area, and provides that information for Wyoming as a benchmark. The median age of the Wyoming counties in the Bighorn section area are aging more rapidly than the statewide average.

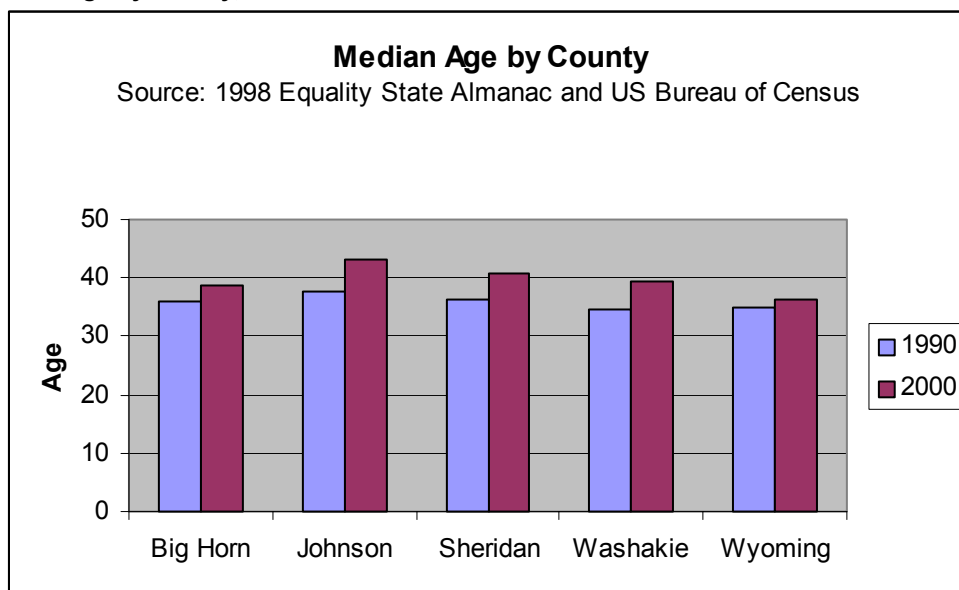
**Chart 3 Center for the Amercian West's Map  
of Residential Density in 1960**



**Chart 4. Center for the Amercian West's Map of Projected Residential Density in 2050**



**Figure 3: Median Age by County, 1990 and 2000**



The aging of Wyoming's population is likely to continue into the future. According to Dr. Steven Maier, President of the Northern Wyoming Community College District, Wyoming is expected to be the only state in the United States that will see a decline in the number of high school graduates over the next two decades. This is thought to be due to the fact that there are relatively few good paying, entry level jobs that would keep young people and families in Wyoming. This is evidenced from increasing prominence of service sector jobs, as opposed to entry level professional and manufacturing sector jobs, which will be discussed in more detail in the economic section the existing condition assessment. This is also evidenced by anecdotal information collected in Wyoming Rural Development Council sponsored community



assessments in Lovell, Worland and Buffalo, where this is a commonly held sentiment by area residents.

One of the implications of an aging population upon the Bighorn National Forest is likely to be different recreation demands. Activities such as driving for pleasure and the use of developed campgrounds are likely to increase, while the relative demand for more strenuous activities, such as mountain climbing or backpacking may decrease.